Second
Five-Year Review Report

White Farm Equipment Company Site
Floyd County, Iowa

September 2004

Prepared for:
Environmental Protection Agency
Region VII
Kansas City, Kansas

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Date: 9/20/04

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Abbreviations and Acronyms

ARARs	Applicable or Relevant and Appropriate Requirements
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
ESD	Explanation of Significant Differences
FS	Feasibility Study
IAC	Iowa Administrative Code
IDNR	Iowa Department of Natural Resources
IEUBK	Integrated Exposure Uptake Biokinetic Model for Lead in Children
LDL	Instrument Detection Limit
MCL	Maximum Contaminant Level
NA	Not Applicable
NCP	National Contingency Plan
NPL	National Priorities List
NS	Not Sampled
O&M	Operation and Maintenance
PVC	Polyvinyl Chloride
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendments and Reauthorization Act
ug/L	Micrograms per Liter

Five-Year Review Summary Form

SITE IDENTIFICATION

Site name *(from WasteLAN)*: White Farm Equipment Company Site

EPA ID *(from WasteLAN)*: IAD065210734

Region: 7	**State:** IA	**City/County:** Charles City / Floyd County

SITE STATUS

NPL status: ☐ Final ☒ Deleted ☐ Other (specify) _____

Remediation status (choose all that apply): ☐ Under Construction ☐ Operating ☒ Complete

Multiple OUs?* ☐ YES ☒ NO | **Construction completion date:** 09/08/1995

Has site been put into reuse? ☐ YES ☒ NO

REVIEW STATUS

Lead agency: ☒ EPA ☐ State ☐ Tribe ☐ Other Federal Agency _____

Author name: Catherine Barrett

Author title: Remedial Project Manager	**Author affiliation:** EPA

Review period:** 10/03/2003 to 09/30/2004

Date(s) of site inspection: 03/30/2004 - 04/01/2004 and 05/11/2004

Type of review:

☒ Post-SARA ☐ Pre-SARA ☐ NPL-Removal only
☐ Non-NPL Remedial Action Site ☐ NPL State/Tribe-lead
☐ Regional Discretion

Review number: ☐ 1 (first) ☒ 2 (second) ☐ 3 (third) ☐ Other (specify) _____

Triggering action:

☐ Actual RA Onsite Construction at OU #____ ☐ Actual RA Start at OU#____
☐ Construction Completion ☒ Previous Five-Year Review Report
☐ Other (specify) _____

Triggering action date *(from WasteLAN)*: 09/29/1999

Due date *(five years after triggering action date)*: 09/29/2004

Five-Year Review Summary Form, cont'd.

Issues:

The protective casing of well 5A was damaged but the polyvinyl chloride (PVC) riser was undamaged. Both the PVC riser and the protective casing of well 6B were damaged.

Weeds and volunteer trees were observed on the landfill and stormwater retention area.

Recommendations and Follow-up Actions:

The volunteer trees should be removed and the grass mowed.

The protective casing for monitoring well WFE-5A needs to be repaired and monitoring well WFE-6B needs to be abandoned.

Protectiveness Statement(s):

The site is protective of human health and the environment. The cap continues to prevent direct contact with landfill materials and minimize surface water runoff and infiltration. The groundwater concentrations of benzene, cadmium, chromium, and lead continue to be below the groundwater performance standards.

Executive Summary

The White Farm Equipment Company site is located on the northern edge of the city of Charles City in Floyd County, Iowa. The site occupies approximately 20 acres and the surrounding land use is mainly agricultural with some residential and commercial.

The final remedy for the White Farm Equipment Company site included installation of a protective cap over the landfill material to prevent direct contact and minimize surface water runoff and infiltration. Groundwater sampling was conducted as part of the remedial design and no groundwater contamination above the groundwater performance standards was detected. Therefore, in accordance with the Statement of Work in the 1991 Consent Decree, groundwater treatment was not implemented. Long-term groundwater monitoring consisting of sampling at the time of the five-year reviews was required in the 1994 Operation and Maintenance (O&M) Plan for the site. An Explanation of Significant Differences (ESD) was issued in 1992 that modified the type of cap to be installed, revised the time frame to complete construction of the cap, and clarified the groundwater point of compliance.

The first five-year review of the remedy at the site was completed in September 1999. The first five-year review concluded that the site remedy remained protective of human health and the environment. The site was deleted from the National Priorities List (NPL) on October 30, 2000. The site is listed on the State of Iowa *Registry of Hazardous Waste or Hazardous Substances Disposal Sites* and is classified as "Requires Continued Maintenance, Site Properly Closed."

The immediate threats have been addressed, and the remedy continues to be protective of human health and the environment. The cap continues to prevent direct contact with the landfill materials and minimize surface water runoff and infiltration. Review of the analytical data from the groundwater monitoring effort indicates that remedial action objectives (RAOs) identified in the Record of Decision (ROD), as amended by the ESD, have been achieved. Specifically, the groundwater contamination levels remain below the groundwater performance standards.

The responsible party has declared bankruptcy, and the site will be fund lead. To insure the integrity of the cap, continued maintenance should be conducted by the Environmental Protection Agency (EPA) and the Iowa Department of Natural Resources (IDNR). Damage to two monitoring wells was observed during the site inspection.

It is required that five-year reviews of the White Farm Equipment Company site continue because contaminants remain at the site above levels which would allow for unlimited use and unrestricted exposure. Groundwater monitoring should be conducted at the time of the next five-year review.

1.0 Introduction

The purpose of the five-year review is to confirm that the remedy at a site continues to be protective of human health and the environment. The conclusions of the review are documented in the five-year review report. The five-year review report identifies issues found during the review, if any, and gives recommendations.

This five-year review report is prepared pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) § 121 and the National Contingency Plan (NCP). CERCLA § 121 states:

> *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after initiation of remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgement of the President that action is appropriate at such a site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to Congress a list of facilities for which such review is required, the results of such reviews, and any actions taken as a result of such reviews.*

The Agency interpreted this requirement further in the NCP; 40 Code of Federal Regulations (CFR) §300.430(f)(4)(ii) states:

> *If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

The EPA, Region VII, has conducted a five-year review of the remedial action implemented at the White Farm Equipment Company site in Charles City, Floyd County, Iowa. This review was conducted by EPA for the site from January 2004 through September 2004. This report documents the results of the review.

This is the second five-year review for the site. The first five-year review was completed in September 1999. The triggering action for this second statutory review is the

completion of the previous five-year review. The five-year review is required because hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure.

2.0 Site Chronology

Table 2-1 presents a summary of the major site events and relevant dates in the site chronology.

Table 2-1
Chronology of Site Events

Event	Date
Site discovery following complaints from the Floyd County Board of Health.	1980
Preliminary assessment completed.	10/30/1985
Site inspection completed.	09/19/1986
Site proposed for the National Priorities List (NPL).	06/24/1988
An Administrative Order on Consent was signed by EPA and two responsible parties requiring completion of a site investigation.	04/14/1989
Remedial investigation (RI) completed by the responsible parties.	11/09/1989
Feasibility study (FS) and risk assessment completed.	06/1990
EPA-prepared focused FS completed.	07/1990
Final listing on the NPL.	08/30/1990
Record of Decision (ROD) was signed.	09/28/1990
A Consent Decree was signed by the responsible parties requiring that they design and perform the site cleanup.	1991
Explanation of Significant Difference (ESD) changing the capping material and groundwater treatment requirements was issued.	07/13/1992
Remedial design completed.	03/30/1994
Remedial action consisting of capping the landfill materials was initiated.	06/27/1994
Remedial action completed.	09/08/1995
The first Five-Year Review was completed.	09/29/1999
EPA deleted the site from the NPL.	10/30/2000

3.0 Background

3.1 Physical Characteristics

The White Farm Equipment Company site is located along the northern edge of the city of Charles City in Floyd County, Iowa. The site occupies approximately 20 acres at the southwest corner of Kellogg Avenue and Rotary Park Road. The site is in the location of a former oxbow lake formed by a cutoff meander of the Cedar River. Remnants of the oxbow lake still exist northwest and south of the site. The site is covered by a vegetated soil cap and is sloped to provide runoff. The site drains to the wetlands (remnants of the oxbow lake) to the northwest and south of the site and ultimately the Cedar River. The Cedar River is approximately 2,200 feet west-southwest of the site. Site maps showing the limits of the cap and locations of monitoring wells are provided in Appendix A.

3.2 Land and Resource Use

The site is currently unoccupied and covered by a vegetated soil cap. The land use of the surrounding area is mainly agricultural and residential. A junkyard is present adjacent to the northeast portion of the landfill. The land use for the site and surrounding areas has not changed significantly since the ROD and ESD were issued.

3.3 History of Contamination

White Farm Equipment Company operated the disposal site on this property, which it leased from H.E. Construction Company. In 1971, White Farm Equipment Company began disposing of foundry sand, bag house dust, and other industrial wastes at the site. Disposal activities ended in 1985.

In 1984, the IDNR required that White Farm Equipment Company install monitoring wells to assess whether environmental impacts from disposal activities had occurred. In 1985, EPA performed a preliminary assessment and from 1989 to 1990, a remedial investigation (RI), feasibility study (FS), and risk assessment were prepared to identify the nature and extent of contamination at the site.

The ROD, signed in 1990, specified a remedy including upgrading the landfill, installation of additional groundwater monitoring wells, extraction and treatment of

groundwater, and long-term maintenance and monitoring. The site was added to the NPL in 1990. Additional groundwater sampling conducted as part of the Remedial Design indicated that there was no groundwater contamination above the groundwater performance criteria at the point of compliance. Therefore, as discussed in the Statement of Work of the 1991 Consent Decree, groundwater treatment and extraction was not implemented. An ESD was signed in 1992 which modified the type of cap, revised the cap construction time frame, and clarified the groundwater point of compliance.

3.4 Initial Responses

In 1984, the IDNR required that the White Farm Equipment Company install monitoring wells to assess whether disposal activities at the site had impacted the environment. A RI/FS was performed by the responsible parties from 1989 to 1990.

3.5 Basis for Taking Action

The landfill materials at the site were found to contain elevated levels of metals and low levels of some organic contaminants. The contaminants of concern at the site identified in the risk assessment included benzene in the groundwater and lead in the soil and landfill material. The risk assessment identified ingestion of groundwater and direct contact with landfill material as exposure pathways which pose unacceptable risks at the site.

4.0 Remedial Actions

4.1 Remedy Selection

The ROD for the White Farm Equipment Company site was signed on September 28, 1990, to address the risks identified in the risk assessment. These risks included direct contact with landfill material and ingestion of contaminated groundwater. The ROD selected a remedy to: 1) control surface water runoff and infiltration through installation of a low permeability cap, and 2) restore groundwater to allow its use as a potable water supply through extraction and treatment. The 1991 Consent Decree required additional groundwater monitoring during the remedial design to confirm the need for groundwater extraction and treatment. The remedial design sampling indicated that no groundwater contamination existed above the groundwater performance criteria at the point of compliance. Therefore, groundwater extraction and treatment was not implemented. An ESD was issued July 13, 1992, that modified the type of cap to be installed, revised the construction time frame, and clarified the groundwater point of compliance. The major components of the final remedy for the site included the following:

- Implementation of institutional controls (restrictive covenant)
- Regrading the landfill to reduce runoff and erosion
- Capping of the landfill in accordance with state of Iowa solid waste landfill closure requirements
- Conducting groundwater monitoring during the five-year reviews
- Performing O&M of the fencing and landfill cover.

4.2 Remedy Implementation

In a Consent Decree in 1991, Allied Products Corporation agreed to perform the remedial design and construct the remedial action. The remedial design and construction of the remedial action were conducted in accordance with the ROD as modified by the ESD. The remedial design was approved by EPA on March 30, 1994.

The remedial action construction activities consisted of installing the compacted cap, vegetating the cap, installing perimeter fencing, and instituting deed restrictions. A restrictive covenant for the property was recorded and filed on October 5, 1992, in Floyd County, and it was verified on June 18, 2004, that the restrictive covenant remains in place. The restrictive covenant prohibits the construction, installation, maintenance, and use of any

wells on the property for the purpose of extracting water for human drinking purposes or for the irrigation of food and feed crops. These restrictions run with the land and are binding on all owners. The remedial action was constructed from mid-1994 to mid-1995. Construction completion was achieved when the Site Closeout Report was completed on September 8, 1995.

4.3 Post Remedial Action Activities

The O&M activities at the site since construction completion were completed in accordance with the O&M plan prepared for the site in January 1994. Post-closure site activities were conducted by the potentially responsible party (PRP) since completion of the remedial action construction and included inspection of the following items:

- Final cover
- Groundwater monitoring wells
- Drainage facilities
- Storm water retention areas
- Access road
- Perimeter fencing, gates, and signs

O&M activities and post closure site inspection were conducted by Allied Products Corporation in October 2000.

Costs for the October 2000 monitoring and maintenance were $2,500 and included the site inspection, removal of small trees from the cover, and preparation of the O&M progress report.

5.0 Progress Since Last Five-Year Review

The first five-year review in September 1999 determined that the response actions at the site continued to protect human health and the environment at the site. The first five-year review recommended that five-year reviews continue because hazardous substances remain at the site above levels which would allow for unlimited use and unrestricted exposure.

In April 2000, Allied Products submitted groundwater monitoring results in compliance with the O&M plan and the Consent Decree which indicated that contaminants were below performance standards. The post-closure site inspection Report Number 9 was submitted by Allied Products in November 2000, which recorded their inspection and maintenance items performed by the PRP.

In October 2000, EPA deleted the White Farm Equipment Company site from the NPL, and a deletion notice appeared in the *Federal Register*.

6.0 Five-Year Review Process

6.1 Administrative Components

The IDNR was notified of the initiation of the five-year review in December 2003.

A schedule was developed for the five-year review extending through September 30, 2004, which included the following components:

- Document review
- Data review
- Groundwater monitoring
- Site inspection
- Five-year review report development and review

6.2 Community Notification and Involvement

A fact sheet announcing the five-year review for the White Farm Equipment Company site was developed in March 2004. The fact sheet was made available on the EPA web site, and a public notice was published in the Charles City Press, Charles City, Iowa, on March 24, 2004. At the end of the five-year review, a fact sheet will be issued and a notice placed in the newspaper to announce the availability of the report at the site repository.

6.3 Document Review

This second five-year review consisted of a review of relevant documents including monitoring data for the site. A complete list of documents reviewed as part of the five-year review process is included in Appendix B. Applicable cleanup standards were reviewed and are listed in Appendix C.

6.4 Data Review

Groundwater monitoring at the White Farm Equipment Company site was completed as part of the five-year review. The previous groundwater monitoring effort was completed in June 1999 for inclusion in the first five-year review.

As part of this second five-year review, groundwater samples were collected on March 29 and 30, 2004, from three of the six existing monitoring wells (WFE-5A, WFE-5B, and WFE-6A). Two monitoring wells (WFE-7A and WFE-7B) were underwater because of spring snow melt conditions and previous rainfall events and could not be sampled.

Monitoring well WFE-6B was damaged and could not be sampled. The protective casing to monitoring well WFE-5A was damaged, but the well itself was intact and able to be sampled. The wells sampled were suitable to characterize the groundwater.

Groundwater samples were analyzed for the presence of benzene, cadmium, chromium, and lead; and the results were compared with the groundwater performance criteria set for the site. Table 6-1 presents the results of the samples collected on March 29 and 30, 2004, along with the results of the samples collected for the first five-year review and the groundwater performance standards. The groundwater performance standard for benzene was set in the ROD. The groundwater performance standards for cadmium, chromium, and lead were set in the 1991 Consent Decree. Based on a review of the data and the data validation information provided by EPA, Region VII Laboratory, the groundwater sampling data are of acceptable quality.

As presented in Table 6-1, the levels of benzene, cadmium, chromium, and lead in the groundwater remain below the groundwater performance standards set for the site. It should be noted that the concentrations of all four analytes were below detection limits during both the 1999 and 2004 monitoring efforts.

6.5 Site Inspection

A site inspection was conducted on May 11, 2004. The purpose of the site inspection was to assess the protectiveness of the remedy. The site inspection included the following elements: inspection of the final cover, the groundwater monitoring wells, the drainage facilities, the storm water retention areas, the access road, the perimeter fencing, gates, and signs.

Two of the monitoring wells located along Kellogg Road west of the site were damaged. The protective steel casing and the polyvinyl chloride (PVC) riser pipe of well WFE-6B were broken and the well was obstructed. This well should be abandoned.

Table 6-1
Groundwater Monitoring Results

Monitoring Well	Analyte							
	Benzene		Cadmium		Chromium		Lead	
	1999	2004	1999	2004	1999	2004	1999	2004
WFE-5A	1.0 U	1.0 U	0.44 U	3.0 U	0.88 Bu	15.0 U	1.9 U	50.0 U
WFE-5B	1.0 U	1.0 U	0.44 U	3.0 U	0.97 Bu	15.0 U	1.9 U	50.0 U
WFE-6A	1.0 U	1.0 U	0.44 U	3.0 U	0.86 Bu	15.0 U	1.9 U	50.0 U
WFE-6B	1.0 U	NS	0.44 U	NS	0.96 Bu	NS	1.9 U	NS
WFE-7A	1.0 U	NS	0.44 U	NS	0.88 Bu	NS	1.9 U	NS
WFE-7B	1.0 U	NS	0.44 U	NS	1.1 Bu	NS	1.9 U	NS
Groundwater Performance Standard*	1.0		5.0		100		50	

Notes:

* The groundwater performance standard for benzene was set in the ROD. The groundwater performance standards for cadmium, chromium, and lead were set in the 1991 Consent Decree.

1999 samples were collected by the responsible party's contractor on June 22 and 23, 1999.

2004 samples were collected by EPA's contractor, on March 30 and 31, 2004.

All values are in micrograms per liter (ug/L).

NS - No sample was collected. Wells WFE-7A and 7B were underwater. Well WFE-6B was damaged and could not be sampled.

U - Not detected above reporting limit listed.

J - The identification of the analyte is acceptable; the reported value is an estimate.

NA - Not applicable.

B - The result is estimated. The analyte concentration is between the Instrument Detection Limit (IDL) and the Contract Required Quantitation Limit (CRQL).

u - The analyte was considered nondetect during data validation on the basis of blank detections.

The protective steel casing of well WFE-5A was broken, but the PVC riser and well cap were undamaged. The protective casing needs to be repaired.

Weeds and volunteer trees were observed growing on the landfill and in the storm water retention areas. The volunteer trees need to be removed, and the landfill should be mowed before the next inspection.

7.0 Technical Assessment

7.1 *Question A: Is the remedy functioning as intended by the decision documents?*

Review of documents, applicable or relevant and appropriate requirements (ARARs), risk assumptions, and the results of the site inspection indicate that the remedy for the site is functioning as intended by the ROD, as modified by the ESD. The cap over the landfill materials has prevented direct contact with contaminated landfill materials and minimized surface water runoff and infiltration. Analytical results from the five-year review groundwater monitoring effort indicate that the benzene, cadmium, chromium, and lead concentrations remain below the groundwater performance criteria set for the site.

The O&M of the cap has been effective in identifying and resolving items that might have impacted the effectiveness of the cap. The O&M should continue to be conducted to ensure the long-term integrity of the cap.

7.2 *Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?*

There have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy.

7.2.1 Changes in Standards and To-Be-Considered Requirements

Completion of the cap construction resulted in the ARARs identified in the ROD for the soil remediation being met. In addition, the contaminant concentrations in the groundwater at the point of compliance continue to meet ARARs (the established groundwater performance criteria). A review of the chemical-specific ARARs found that the action level for lead set following the hierarchical methods established in 567 Iowa Administrative Code (IAC) §133.2 (455B, 455E) has changed from 50 micrograms per liter (ug/L) to 15 ug/L. This change occurred because of a change to the maximum contaminant level (MCL) set in the Safe Drinking Water Act. The groundwater monitoring conducted during the five-year reviews, remedial design, and the RI, has consistently found the groundwater lead concentrations at the point of compliance to be below detection limits (as low as 1.9 ug/L). Therefore, the remedy remains protective. In addition, the risk assessment performed in

1990 indicated that benzene was the sole driver of the risk associated with ingestion of the groundwater. Lead was driving the risk in the soil exposure pathway. Because lead contamination did not drive the groundwater ingestion risks at the site and the lead concentrations have consistently been an order of magnitude below the new lead MCL, preparation of an ESD documenting the changed action level is not recommended.

7.2.2 Changes in Exposure Pathways, Toxicity, and Other Contaminant Characteristics

The risk assessment completed for the site identified benzene as the sole driver of the groundwater exposure pathway and lead as the sole driver for the soil exposure pathway. No exposures other than those evaluated in the 1990 risk assessment have been identified at the White Farm Equipment Company site since the ROD, the ESD, and the first five-year review were completed.

Lead risks are now evaluated by estimating blood-lead levels using the Integrated Exposure Uptake Biokinetic Model for Lead in Children (IEUBK Model), rather than calculating a hazard index for exposure to lead-contaminated soil as was done in the 1990 risk assessment prepared for the White Farm Equipment Company site. However, the cap at the site continues to prevent exposure to the landfill materials and minimize surface water runoff and infiltration. Therefore, recalculation of the cleanup levels for the site using the IEUBK Model is not recommended.

The cancer slope factor for benzene used in the 1990 risk assessment for the White Farm Equipment Company site was 2.9×10^{-2} (mg/kg-day)$^{-1}$. The current cancer slope factor for benzene (for ingestion) is 5.5×10^{-2} (mg/kg-day)$^{-1}$. However, the groundwater performance standard for benzene was set at the EPA lifetime health advisory level rather than a calculated risk-based level. Therefore, the change in the cancer slope factor does not effect the protectiveness of the remedy and preparation of an ESD documenting the changed cancer slope factor is not recommended.

7.3 *Question C: Has any other information come to light that could call into question the protectiveness of the remedy?*

No new ecological targets have been identified at the site. Because of the bankruptcy of the responsible party the site will be fund lead, and future O&M should be conducted by EPA and IDNR. No other events have occurred within the last five years that would effect

the protectiveness of the remedy. There is no other information that calls into question the protectiveness of the remedy.

7.4 Technical Assessment Summary

Based on the data reviewed and the site inspection, the remedy is functioning as intended by the ROD and ESD. There have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy. The concentrations of benzene, cadmium, chromium, and lead were below the groundwater performance standards during the first and the second five-year reviews.

8.0 Issues

Table 8-1 summarizes the major issues identified during the second five-year review that effect the protectiveness of the remedy.

Table 8-1
Issues Identified During the Five-Year Review

Issue	Currently Affects Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)
Grass, volunteer trees on landfill cap and storm water retention areas	N	N, cap should be mowed and volunteer trees removed.
Damaged protective casing to monitoring well WFE-5A.	N	N, needs to be repaired.
Damaged riser and protective casing to monitoring well WFE-6B.	N	N, needs to be abandoned.

9.0 Recommendations and Follow-Up Actions

Table 9-1 summarizes the recommendations and follow-up actions identified during the second five-year review.

Table 9-1
Recommendations and Follow-up Actions

Issue	Recommendations / Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness? (Y/N)	
					Current	Future
Cap	Mow cap and remove volunteer trees	EPA/IDNR	EPA/ IDNR	12 months	N	N
Damaged WFE-5A.	Repair protective casing.	EPA/IDNR	EPA/ IDNR	12 months	N	N
Damaged WFE-6B.	Abandon well.	EPA/IDNR	EPA/ IDNR	12 months	N	N

10.0 Protectiveness Statement

The site is protective of human health and the environment. The cap continues to prevent direct contact and minimize surface water runoff and infiltration. Continued O&M of the cap needs to be conducted to ensure that the integrity of the cap is maintained. Grass needs to be mowed and volunteer trees removed. Monitoring well WFE-5A needs to be repaired and monitoring well WFE-6B needs to be abandoned.

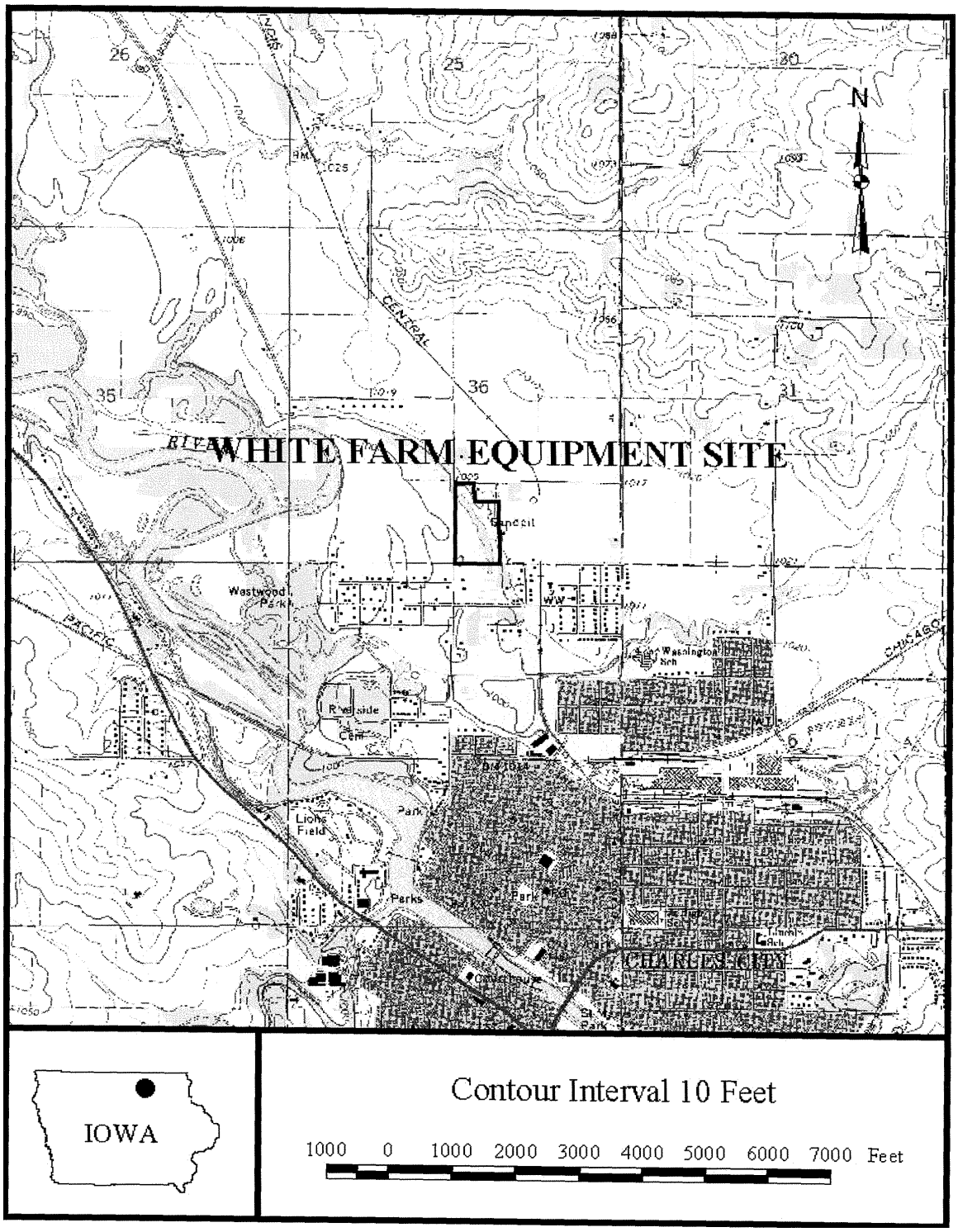
The concentrations of benzene, cadmium, chromium, and lead in the groundwater continue to meet groundwater performance standards. Monitoring should continue to be conducted at the time of the five-year reviews to ensure that the groundwater performance standards continue to be met.

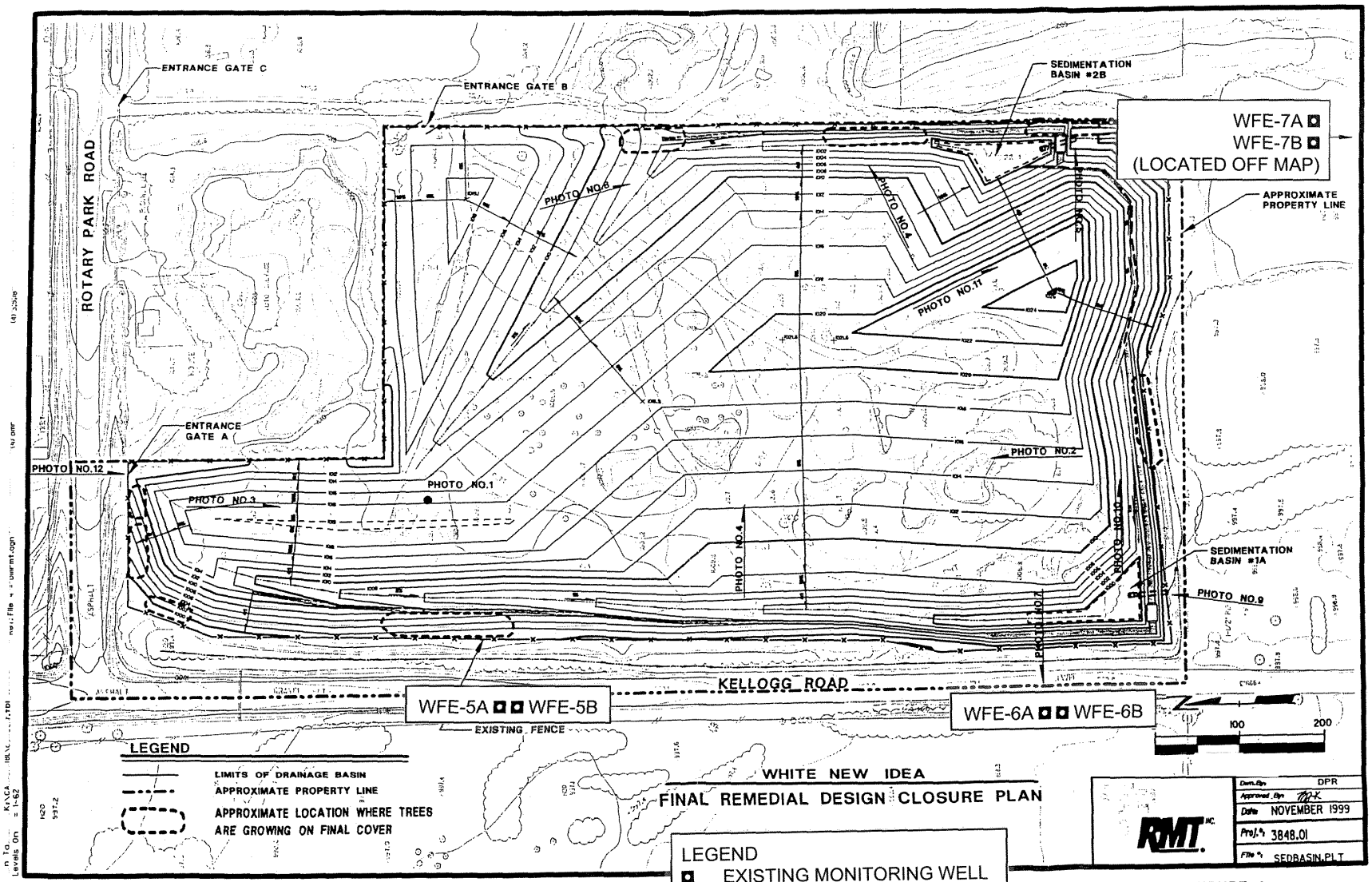
11.0 Next Review

The next five-year review for the White Farm Equipment Company site will be completed in September 2009.

Appendix A
Site Figures

(White Farm Equipment)





RMT COMPUTER AIDED DESIGN & DRAFTING

FIGURE 1

Appendix B
Site Documents Reviewed

Documents Reviewed
White Farm Equipment Company Site
Second Five-Year Review

Howard R. Green Company, Final Draft Remedial Investigation Report, White Farm Equipment Landfill Site, Charles City, Iowa, November 9, 1989.

RMT Inc., Operation and Maintenance Plan for the White Farm Equipment Landfill Site, Charles City, Iowa, prepared on behalf of Allied Products Corporation, January 1994.

RMT Integrated Environmental Solutions, on behalf of Allied Products Corporation, letter report, subject: June 1999 5-Year Groundwater Monitoring Event Results, White Farm Equipment Landfill Site, Charles City, Iowa, April 14, 2000.

RMT Integrated Environmental Solutions, on behalf of Allied Products Corporation, letter report, subject: Report of Post-closure Inspection, O&M Progress Report No. 9, White Farm Equipment Landfill Site, Charles City, Iowa, November 6, 2000.

EPA, Record of Decision, The White Farm Equipment Company Site, Charles City, Iowa, September 28, 1990.

EPA, Explanation of Significant Differences, White Farm Equipment Company Site, July 13, 1992.

EPA, Five-Year Review Report, White Farm Equipment Company Site, Charles City, Iowa, September 29, 1999.

United States of America, Plaintiff, v. Allied Products Corporation and H.E. Construction, Inc., Defendants, Consent Decree, lodged July 14, 1992, filed September 18, 1992, signed by the Defendants November 1991.

Appendix C
Applicable or Relevant and Appropriate Requirements

Appendix C
ARARs Review

The following table summarizes the ARARs presented in the Record of Decision (ROD) for the White Farm Equipment Company site. It should be noted that action-specific ARARs associated with groundwater extraction and treatment are not listed because groundwater extraction and treatment were not implemented at the site and are therefore no longer applicable or relevant and appropriate.

Chemical-Specific ARARs		
Regulation	Requirement Synopsis	Comments
567 IAC §133.2 (455B, 455E)	Establishes hierarchy to be used to establish cleanup levels for groundwater.	Groundwater performance standards were set based on the hierarchy presented in the regulation. Groundwater was required to meet the performance standards at the point of compliance which was set at the limits of the landfill. Compliance with groundwater performance standards is measured through monitoring conducted during the five-year reviews.
Action-Specific ARARs		
567 IAC §103.2(13)	Provides closure requirements for solid waste landfills.	A cap was installed over the landfill materials that met the requirements of the regulation.
Location-Specific ARARs		
40 CFR Part 6, Appendix A	Describes EPA policy on implementing Executive Order 11990 for Wetlands Protection.	A cap was installed over the landfill materials to minimize surface water runoff to the adjacent wetlands.